

In re MICHAELI ET AL., Application No. 09/845,606
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REMARKS

The non-final Office action mailed February 20, 2004 has been fully considered. Please enter the amendments and remarks presented herein. Reconsideration and/or further prosecution of the application is respectfully requested. No new matter is added by this amendment.

The following describes the amendments to the ten claim sets.

- Original claim 1 and dependent claims 1-12 and new claims 29-30. Claim 3 is amended to remove the word "further." Claim 4 is amended to correct the phrase in accordance with the Office action that the memory stores the plurality of data structures, with support provided at least by Fig. 3 and its corresponding discussion. Dependent claims 9-12 are canceled without prejudice as they were included for claim differentiation purposes and to help demonstrate the breadth of the invention, and thus are included in claim 1, and so these claim fees can be used for new claims 29-32. New claim 29 is added to add the limitation that the order is a round robin among each of the sub-data structures. Support is provided at least on page 6, lines 16-20. New claim 30 is added to add the limitation that a counter is used to identify the order. Support is provided at least on page 11, line 1 through page 12, line 2.
- Original claim 13 and dependent claims 14-20 and new claims 31-32. Claim 15 is amended to remove the word "further." Claim 16 is amended to correct the phrase in accordance with the Office action that the memory stores the plurality of data structures, with support provided at least by Fig. 3 and its corresponding discussion. New claim 31 is added to add the limitation that the order is a round robin among each of the sub-data structures. Support is provided at least on page 6, lines 16-20. New claim 32 is added to add the limitation that a counter is used to identify the order. Support is provided at least on page 11, line 1 through page 12, line 2.
- Claim 21 is amended to emphasize that the elements are distributed with no two consecutive elements in the order added to a same one of the linked list data structures. Support is provided at least on page 6, lines 16-20.

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- Claim 22 is amended to emphasize that the elements are distributed with no two consecutive elements in the order added to a same one of the linked list data structures. Support is provided at least on page 6, lines 16-20.
- Claim 23 is amended to emphasize that the order is a predetermined order independent of the received information. Support is provided at least on page 6, lines 16-20.
- Claim 24 is amended to emphasize that the order is a predetermined order independent of the received information. Support is provided at least on page 6, lines 16-20.
- Claim 25 is amended to emphasize that the elements are distributed with no two consecutive elements in the order added to a same one of the linked list data structures. Support is provided at least on page 6, lines 16-20.
- Claim 26 is amended to emphasize that the elements are distributed with no two consecutive elements in the order added to a same one of the linked list data structures. Support is provided at least on page 6, lines 16-20.
- Claim 27 is amended to emphasize that the order is a predetermined order independent of the received information. Support is provided at least on page 6, lines 16-20.
- Claim 28 is amended to emphasize that the order is a predetermined order independent of the received information. Support is provided at least on page 6, lines 16-20.

The following remarks are numbered to reference the same numbered paragraphs of the Office Action to which they are directed.

Paragraph 3. Claims 4, 9-12, and 16 stand rejected under 35 USC § 112, second paragraph for being indefinite. Claims 4 and 16 are amended to correct the phrase that the memory stores the plurality of data structures, with support provided at least by Fig. 3 and its corresponding discussion. Dependent claims 9-12 are canceled without prejudice as they were included for claim differentiation purposes and to help demonstrate the breadth of the invention, and thus are included in claim 1, and so these claim fees can be used for new claims 29-32. For

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at least these reasons, applicants believe there are no § 112 issues, and request these rejections be withdrawn.

Paragraph 5. Claims 1-28 were rejected under 35 USC § 102(b) as being anticipated by Klausmeier et al., US Patent 5,838,915.

Applicants respectfully disagree with the Office's interpretation of Klausmeier et al. and traverse the 35 USC § 102(b) rejections of the pending claims as Klausmeier et al. neither teaches nor suggests all of the claims elements and limitations as recited in a pending claim.

For anticipation under 35 USC § 102, the reference must teach each and every aspect of the claimed invention either explicitly or impliedly. MPEP § 706.02. Inherent means it *must* occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*).

The Office relies on the teaching of Klausmeier et al. in col. 1, lines 66-67 and col. 6, line 33 for anticipating the distributor distributing items to the multiple sub-data structures in an order and the receiver receiving the items from the multiple sub-data structures in the order (and for variants of this claim language). For Klausmeier et al. to anticipate this, Klausmeier et al., in its language, must teach that cells are received and distributed to the multiple queues in an order and retrieved from the queues in the same order. Applicants respectfully submit that this is not a teaching of Klausmeier et al. Rather, Klausmeier et al. maintains the order of cells belonging to a particular connection in the same order by having a separate queue for each connection, but neither teaches nor suggests maintaining the same ordering of cells as they are distributed to the different queues nor retrieving cells from the queues in the same order that they were distributed to the queues.

The element of Klausmeier et al. that identifies from which queue of the multiple queues to next remove a cell is service controller 620. As stated in Klausmeier et al.:

"A service controller 620 is coupled to the queue controller 600 and controls the queue server within queue controller 600. The service controller 620 determines

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when each queue will be served. Specifically, when service controller 620 determines that a particular connection should be served, service controller 620 transmits a signal to the queue server to indicate a connection. In response to the signal from service controller 620, the queue server retrieves the cell from the head of the queue corresponding to the indicated connection and causes the cell to be transmitted over stratabus interface circuit 540." Klausmeier et al., col. 4, lines 34-44.

In contrast to the overall ordering of the cells, the complete sentences in Klausmeier et al. relied on by the Office in rejecting the claims are:

- "Another object of the invention is to provide a fast and efficient mechanism for tracking and maintaining *the order of the cells in each channel* supported by the digital switch. Col. 1, lines 65-67 (*emphasis added*); and
- "As explained above, queue server 702 maintains head array 704, tail array 706 and queue array 708 to keep track of the location of the cells that are stored within cell memory 622 that are associated with each connection, and to keep track of the sequence in which they arrived *relative to the other cells associated with the same connection*. Col. 6, lines 29-34 (*emphasis added*).

As these statements teach, Klausmeier et al. maintains the same order of cells *within a connection*, and cell memory 622 *includes one queue for each connection*. Col. 4, lines 47-48 (*emphasis added*).

There is no teaching nor suggestion for maintaining the order in which cells are distributed to the different queues according to their connection and retrieving and forwarding the cells from these multiple queues in the same order. It is maintaining the order of cells within a connection that is important to Klausmeier et al.; and in fact, Klausmeier et al. neither teaches nor suggests maintaining the order of cells distributed to the multiple queues.

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Moreover, if the Office attempts to apply Klausmeier et al. operating on a single connection of data, the data may be put in a single queue and removed from the single queue in the same order, but this still does not distribute the data to multiple queues as required by the claims.

In fact, Klausmeier et al seems to teach away from such a maintenance of order among cells of a different stream as it mentions different classes and priorities of services which implies that such an order will not be maintained as cells will be scheduled not based on order of receipt among cells of different connections, but on other factors (e.g., QoS, etc). Even more so, Klausmeier et al. neither teaches a mechanism or other means to maintain indications of this ordering so that service controller 620 will request that cells be retrieved from the queues in the order in which they are distributed to the multiple queues. Thus, there is no way for Klausmeier et al. to distribute cells to different queues and to schedule their retrieval in the same order in which they arrived and were distributed to the queues corresponding to their respective connections. Thus, applicants respectfully submit that Klausmeier et al. neither teaches nor suggests maintaining the order of cells distributed to the multiple queues.

In contrast to the teachings of Klausmeier et al., one aspect of the present application as claimed is to distribute data items across multiple sub-data structures and to retrieve them from these multiple sub-data structures in the order in which they were received and placed in the multiple sub-data structures. Thus, multiple, slower operating data structures can be used to support a stream of data of a higher rate.

Applicants respectfully submit that even a broad interpretation of the pending claims is not anticipated by, nor obvious over Klausmeier et al. for at least the reasons already presented herein, as well as for the reasons stated for the claim sets as follows.

Paragraphs 6-13 - claims 1-20. The Office action relies on col. 1, lines 66-67 and col. 6, line 33 of Klausmeier et al. for anticipating the claim limitation of distributing the plurality of items/pieces of information among the sub-data structures. For at least the reasons presented *supra*, applicants respectfully traverse this rejection as Klausmeier et al. neither teaches nor

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suggests these limitations. Therefore, independent claim 1 and its dependent claims 2-8 and 29-30, and independent claim 12 and dependent claims 14-20 and 31-32 are believed to be allowable. Claims 9-12 are canceled herein without prejudice to free claims fees for the dependent claims being added herein as these configurations are included in the independent claims and were included to show the breadth of the invention. Moreover, new claims 29 and 31 recite that the order is a round robin order, which is neither taught nor suggested by Klausmeier et al. as it places cells in a queue based on its identified connection, and not in such an order. Moreover, claims 30 and 32 recite that a counter is used to identify the order, which is neither taught nor suggested by Klausmeier et al. for at least the same reason.

Paragraphs 14-15 - claims 21, 22, 25 and 26. Claims 21, 22, 25 and 26 are amended to emphasize that the elements are distributed with no two consecutive elements in the order added to a same one of the linked list data structures herein, which is neither taught nor suggest Klausmeier et al. for at least the reasons extensively discussed *supra*. Therefore, claims 21, 22, 25 and 26 are believed to be allowable.

Paragraphs 16-17 - claims 23, 24, 27 and 28. Claims 23, 24, 27 and 28 are amended to emphasize that the order is a predetermined order independent of the received information, which is neither taught nor suggest Klausmeier et al. for at least the reasons extensively discussed *supra*. Also, the Office relies on FIGs. 8 and 9 in rejecting the claims, however, applicants believe this is also misguided as FIGs. 8 and 9 operate on a single queue and not among queues. For example, step 812 of Klausmeier et al. is concerned with advancing to a next storage location in the queue and not among queues, and therefore neither teaches nor suggests advancing to a next one of the sub-data structures in contrast with the rejection presented in the claims. For at least these reasons, claims 23, 24, 27 and 28 are believed to be allowable.

Final Remarks. In view of the above remarks and for at least the reasons presented herein, all pending claims are believed to be allowable over the prior art of record, the application is considered in good and proper form for allowance, and the Office is respectfully requested to issue a timely Notice of allowance in this case. Applicant requests any and all

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rejections and/or objections be withdrawn. If, in the opinion of the Office, a telephone conference would expedite the prosecution of the subject application, the Office is invited to call the undersigned attorney.


If the Office action complies with MPEP § 706 and specifically 37 CFR 1.104(c)(2), then Klausmeier et al. is the best reference available. As this reference neither teaches nor suggests all the claim elements and limitations as required by the MPEP, then all pending claims are believed to be allowable, and applicants request the claims be allowed and the application pass to issuance.

Applicants believe no extension of time is required, but hereby petitions any such extension of time required and authorizes the Commissioner to charge any associated fees to Deposit Account No. 501430. Moreover, the Commissioner is hereby generally authorized under 37 C.F.R. § 1.136(a)(3) to treat this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 requiring an extension of time as incorporating a request therefore, and the Commissioner is hereby specifically authorized to charge Deposit Account No. 501430 for any fee that may be due in connection with such a request for an extension of time. Moreover, the Commissioner is hereby authorized to charge payment of any fee due any under 37 C.F.R. §§ 1.16 and § 1.17 associated with this communication or any future communication in this or any related application filed pursuant to 37 C.F.R. § 1.53 or credit any overpayment to Deposit Account No. 501430.

Respectfully submitted,
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By

 5/20/2004
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